
सॉफ्टबॉल — विशिष्टि

(पहला पुनरीक्षण)

Softballs — Specification

(*First Revision*)

ICS 97.220.40

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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Sports Goods Sectional Committee had been approved by the Production and General Engineering Division Council.

Softball is a game similar to baseball played with a larger ball. There are two rule codes for softball generally: slow-pitch softball and fast pitch softball. Slow-pitch softball is the most common type, while women's fast pitch softball is a summer Olympic sports. This standard specifies the requirements for ball used in the softball game.

This standard was first published in 1969. In this revision, requirements were altered to align the standard with, the latest international rules of the game and taken up to keep pace with the latest technological developments and international practices. In preparing of this standard, rules and regulations of the game accepted internationally have been adhered to while giving consideration to the manufacturing and testing practices prevalent in the country and abroad.

In this revision following major changes have been made:

- a) Material specifications have been updated;
- b) Different types of softballs are incorporated based on their uses; and
- c) Shape and dimension have been updated.

The composition of the Committee, responsible for the formulation of this standard is given at Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

SOFTBALLS — SPECIFICATION

(First Revision)

1 SCOPE

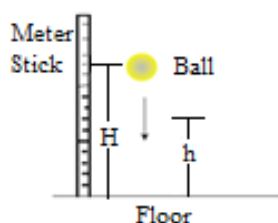
This standard prescribes the dimension and quality requirements for the balls used in softball games.

2 TERMINOLOGY

2.1 Coefficient of Restitution (COR) - Coefficient of restitution is a measure of energy that is lost during the impact.

$COR = \text{Sq. Root (Average re-bounce height / Initial fixed height)} = \sqrt{h/H}$

Initial Fixed height H (cm)	h ₁ (cm)	h ₂ (cm)	h ₃ (cm)	h ₄ (cm)	h ₅ (cm)	Avg h (cm)	COR $\sqrt{h/H}$
100	21	23.5	20.5	24	22	22.2	0.47



2.2 Fast Pitch - In fast-pitch, the ball is thrown straight or in a windmill type motion across the plate.

2.3 Slow pitch - Slow-pitch involves throwing the ball in an arch and at moderate speed.

3 CLASSIFICATION

Based on their uses of softballs, they are classified into following types:

- Type 1 — 30.5 cm (12 inch) fast pitch,
- Type 2 — 30.5 cm (12 inch) slow pitch, and
- Type 3 — 27.9 cm (11 inch) fast pitch.

4 REQUIREMENTS

4.1 Materials

4.1.1 Core

The core can be made of compressed corkwood, natural rubber, synthetic rubber, PU or any combination of said materials, unwound or wound with layers of yarn uniformly over the core made from the materials mentioned above.

Based on materials used in the cores of the softball, they are classified as follow:

- Very soft PU or foam core — soft foam core for use in the ball for small children.
- Soft PU or foam Core — Foam core harder than very soft PU or foam core above but still soft enough not to harm young learning athletes.
- Cushioned corkwood core — Compressed corkwood core which is covered with rubber or foam on top so that it feels soft but is hard enough to be used in youth tournaments.
- Compressed corkwood core — Compressed corkwood core is, as the name suggests, cork wood compressed to make a ball, rubber is used to help cork wood stick together.
- COR47 core — Regulated core for match or tournaments balls with the COR 0.47 (coefficient of restitution at 0.47) fast pitch and slow pitch matches.

4.1.2 Cover

The cover of the ball can be leather, synthetic leather, PU coated fabric, PVC coated fabric-lined or unlined maintaining a uniform stretch to avoid the ball losing shape in usage.

4.1.3 Inks

The inks used to print on the balls shall be non-toxic.

4.2 Shape, Dimension, and Weight

Shape, dimension, and weight for various types of balls shall be as given in Table 1

Table 1 Requirements of Softball
(Clause 4.2)

Sl. No	Description	Requirements		
		Type 1	Type 2	Type 3
(1)	(2)	(3)	(4)	(5)
i)	Ball colour	White or yellow optic	White	White
ii)	Thread colour	White or red stitch	Red stitch	Red stitch
iii)	Circumference, mm <i>min</i>	302-308	302-308	276-283
iv)	Weight, g, <i>min</i>	178-198.4	178-198.4	166.5-173.6

5 CONSTRUCTION AND WORKMANSHIP

5.1 The 30.5 cm (12 in) ball shall be between 30.2 cm and 30.8 cm in circumference, and shall weigh between 178 gm and 198.4 gm. The flat seam style shall have stitches not less than 88 in each cover, sewn by the two-needle method.

5.2 The 27.9 cm ball shall be between 27.6 cm and 28.3cm in circumference and shall weigh between 166.5 gm and 173.6 gm. The flat seam style shall have not less than 80 stitches in each cover, sewn by the two-needle method.



FIG 1. Typical Design of the Ball Used in Softball

6 PACKING AND MARKING

6.1 Packing

Each ball shall be wrapped in moisture-proof paper and packed in cardboard boxes or as agreed to between the purchaser and the manufacturer.

6.2 Marking

6.2.1 The softball shall be marked with the following:

- Manufacturer's name or initials, or recognized trade-mark;
- Name of the material and type of the softball;
- Net weight of the softball;
- Batch or lot number, and
- Month and year of manufacturing.

6.2.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the product(s) may be marked with the standard mark.

ANNEX A
(Foreword)

COMMITTEE COMPOSITION

Sports Goods Sectional Committee, PGD 41

<i>Organization</i>	<i>Representative(s)</i>
Sports Goods Export Promotion Council	SHRI TARUN DEWAN (Chairman)
All India Lawn Tennis Association, New Delhi	SHRI NAR SINGH
Anand and Anand	SHRI ASHISH ANAND
Athletic Federation of India	SHRI SANDEEP MEHTA SHRI GOPALA KRISHNAN (<i>Alternate</i>)
Central Institute of Plastics Engineering & Technology (CIPET), Murthal	DR S N YADAV
COSCO India Pvt Ltd, Gurgaon	SHRI PANKAJ JAIN SHRI NARINDER JAIN (<i>Alternate</i>)
Director Equipment, Sports Authority of India, New Delhi	SHRI ROQUE DIAS
Freewill Sports Pvt Ltd., Jalandhar	SHRI RAJESH KHARBANDA
Government e Market Place, New Delhi	SHRI N K MALHOTRA
Gymnastic Federation of India, Mumbai	SHRI RIAZ BHATI
Hockey India	COMMANDER R K SRIVASTAVA
Micro, Small and Medium Enterprises, Technology Development Centre, New Delhi	SHRI V K SINGH
NELCO (India) Pvt Ltd, Meerut	SHRI AMBER ANAND
Office of Development Commissioner (MSME), Delhi	SHRI SUNIL GUPTA
Premier Enterprises, Meerut	SHRI SUMESH AGARWAL SHRI KSHITIJ AGARWAL (<i>Alternate</i>)
Process cum Product Development Centre, Meerut	SHRI SUNIL GUPTA
Ranson Sports Industry, Jalandhar	SHRI ARVIND SINGH RANA
Sanspareils Greenlands Pvt Ltd.	SHRI PUNEET ANAND SHRI ALOK MISHRA (<i>Alternate</i>)
Shriram Institute For Industrial Research, Delhi	DR VINAY TYAGI
Soccer International Pvt Ltd. Jalandhar	MS SHAALINI GUPTA
Softball Association of India	MS SHIBANI TAGORE

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<i>Organization</i>	<i>Representative(s)</i>
Sports Goods Manufacturers and Exporters Association (SGMEA), Jalandhar	Ms HARSHITA
Sports Line, New Delhi	SHRI OJASVI NAGPAL
Stag International Sports, Meerut	SHRI RAKESH KOHLI SHRI VIVEK KOHLI (<i>Alternate</i>)
Universal Sports, Jalandhar	SHRI MAHESH CHADHA
Vats Sports, Meerut	SHRI LOKESH VATS
Voluntary Organisation in Interest of Consumer Education (VOICE), New Delhi	SHRI M A U KHAN
Director General, BIS	SHRI R R SINGH, SCIENTIST 'E', DIRECTOR AND HEAD (PGD) [REPRESENTING DIRECTOR GENERAL (<i>Ex-officio</i>)]

Member Secretary
SHRI AJAY KUMAR
ASSISTANT DIRECTOR AND SCIENTIST 'B' (PGD), BIS

Bureau of Indian Standards

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Review of Indian Standards

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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